

What is Claimed:

1. One or more devices device in a network comprising:  
agents configured to collect information relating to other devices in the network; and  
at least one resolver configured to identify, based on identification information of a subscriber, network resources that manage elements associated with the subscriber to implement network services for the subscriber, the resolver performing the identification of the network resources in accordance with a resolution process determined based on the information collected by the agents, the resolution process specifying a path from the identification information of the subscriber to the network resources.
2. The one or more devices of claim 1, further comprising:  
a plurality of host components that each provide a framework for execution of the agents and the at least one resolver.
3. The one or more devices of claim 2, wherein the plurality of host components are distributed in the network.
4. The device of claim 1, wherein the other devices in the network include at least one of service activation engines, Radius servers, and Lightweight Directory Access Protocol servers.

5. The device of claim 1, wherein the resolution process generates a resolution graph defined by vertices and edges, where the vertices represent network data types used by the resolvers and the edges represent resolvers that can perform a mapping from the data type represented by a source vertex to a data type represented by a destination vertex.

6. The device of claim 5, wherein the resolution graph is further defined by constraints that specify prerequisites for traversing the edges.

7. The device of claim 5, wherein the data types include at least one of an IP address, an IP pool, and a service activation engine ID.

8. The device of claim 1, wherein the agents are dynamically added in response to devices being added to the network.

9. The device of claim 1, wherein the software agents include at least one remote agent that executes on a one of the other devices with which the agents collect information.

10. The device of claim 1, wherein the network resources that manage the elements comprises service activation engines.

11. The device of claim 1, wherein the network resources that manage the elements are implemented within routers.

12. The device of claim 1, wherein the software agents push the collected information to the at least one resolver.

13. A method implemented in a network comprising:  
collecting information pertaining to a plurality of different network devices via a set of collection agents; and  
identifying one or more of the network devices as network devices that provide services to a subscriber of the network based on information that identifies the subscriber and based on the collected information.

14. The method of claim 13, further comprising:  
pushing the collected information to a network information collector (NIC).

15. The method of claim 13, further comprising:  
transmitting the collected information to a network information collector (NIC) when the collected information is requested by the NIC.

16. The method of claim 13, wherein the collection agents are executed remotely at a one of the plurality of network devices.

17. The method of claim 13, wherein the information that identifies the subscriber is an IP address of the subscriber.

18. The method of claim 13, wherein the identified one or more of the network devices are service activation engines (SAEs) that manage routing devices.

19. The method of claim 13, wherein the different network devices include at least one of a Radius server and a Lightweight Directory Access Protocol (LDAP) server.

20. A system comprising:

- a gateway configured to receive network service requests from or on behalf of subscribers in a network, at least some of the service requests requiring configuration of one or more network elements to satisfy the service request;
- a network information collector (NIC) configured to identify a management entity associated with the one or more network elements required to satisfy the service request, the NIC including:
  - a plurality of agents configured to collect information relating to a state of a plurality of network elements, the collected information being used to identify the management entity.

21. The system of claim 20, wherein the NIC further includes:

at least one resolver configured to create a resolution graph and identify the management entity by traversing the resolution graph.

22. The system of claim 21, further comprising:  
a plurality of distributed resolvers.

23. The system of claim 21, wherein the resolution graph is formed based on the information collected by the plurality of agents.

24. The system of claim 21, wherein the resolution graph is defined by vertices and edges, where the vertices represent network data types used by the resolvers and the edges represent resolvers that can perform a mapping from the data type represented by a source vertex to a data type represented by a destination vertex.

25. The system of claim 24, wherein the resolution graph is further defined by constraints that specify prerequisites for traversing the edges.

26. The system of claim 24, wherein the data types include at least one of an IP address, an IP pool, and a service activation engine ID.

27. A method of resolving a resolution request to identify a management resource, the method comprising:

receiving a resolution request that includes an identification of a subscriber;

performing a resolution process that specifies an ordering of functions required to satisfy the resolution request;

selecting resolvers designed to perform the functions specified in the resolution process; and

controlling the resolvers to perform the functions specified in the resolution process.

28. The method of claim 27, wherein the resolvers are distributed across different network elements in a network.

29. The method of claim 27, wherein the performing a resolution process comprises consulting a resolution graph, wherein the resolution graph includes:

defining the resolution graph as a graph that includes vertices and edges, where the vertices represent network data types used by the resolvers and the edges represent resolvers that can perform a mapping from the data type represented by a source vertex to a data type represented by a destination vertex.

30. The method of claim 29, wherein selecting resolvers further includes:

associating a cost value with the edges of the resolution graph; and  
selecting edges based on the associated costs.

31. The method of claim 30, wherein edges that are associated with remote resolvers are associated with higher cost values than edges associated with local resolvers.

32. The method of claim 29, wherein selecting resolvers further includes:

associating constraints with the edges of the resolution graph that specify prerequisites for traversing the edges; and  
selecting edges based on the associated constraints.

33. The method of claim 29, wherein the data types include at least one of an IP address, an IP pool, and a service activation engine ID.

34. At least one device comprising:  
means for collecting information pertaining to a plurality of different network devices via a set of customizable collection agents; and  
means for identifying one or more of the network devices as network devices that provide services to a subscriber of the network based on information that identifies the subscriber and based on the collected information.